

KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS  
DEPARTMENT OF MATHEMATICS & STATISTICS

MATH 201-02

Quiz # 2

Feb 20, 2013

NAME:

ID#:

**SHOW ALL YOUR WORK**

- (a) **(1points)** Plot the point whose Cartesian coordinates are  $(-\sqrt{3}, 1)$ .

(b) **(1points)** Find polar coordinates  $(r, \theta)$  for the point in part (a) with  $r > 0$  and  $0 < \theta < 2\pi$ .

(c) **(1points)** Find polar coordinates  $(r, \theta)$  for the point in part (a) with  $r < 0$  and  $0 < \theta < 2\pi$ .
- (3points)** Change the equation  $r = \cot \theta \csc \theta$  to Cartesian coordinates and sketch its graph.
- (4points)** Find the length of the curve  $r = \cos^4\left(\frac{\theta}{4}\right)$ ,  $0 \leq \theta \leq \frac{\pi}{2}$ .